

What is claimed is:

1. A collision determination system for detecting a collision of a vehicle with an object and outputting an actuating signal to collision mitigating devices, said system comprising:

a plurality of acceleration sensors for mounting to a front portion of said vehicle to detect accelerations of movement of said front portion in the vehicle longitudinal direction;

an actuation permitting means for outputting an actuation permitting signal for a fixed time period when one of said acceleration sensors detects an acceleration equal to or more than a set value within a set time after another acceleration sensor detects an acceleration equal to or more than the set value;

a collision detecting means for outputting a collision detection signal when determining that a collision with a given object occurs based on acceleration detected by at least one of said acceleration sensors; and

an actuating signal outputting means for outputting an actuating signal to said collision mitigating devices when receiving both an actuation permitting signal from said actuation permitting means and a collision detection signal from said collision detecting means.

2. A collision determination system according to claim 1, wherein a control unit including said actuation permitting means, collision detecting means and actuating signal outputting means is mounted in a position different from that of said acceleration

sensors.

3. A collision determination system for detecting a collision of a vehicle with an object and outputting an actuating signal to
5 collision mitigating devices, said system comprising:

a plurality of acceleration sensors for mounting to a front portion of said vehicle to detect accelerations of movement of said front portion in the vehicle longitudinal direction;

a plurality of collision detecting means provided in
10 correspondence with said respective acceleration sensors to perform calculations with said detected accelerations detected by said acceleration sensors, thereby to detect a collision of said vehicle with said object;

a plurality of acceleration comparing means provided in
15 correspondence with said respective acceleration sensors to determine whether or not said detected accelerations detected by said acceleration sensors are equal to or more than a set value;
and

an actuating signal outputting means for outputting an
20 actuating signal when determining that any of said collision detecting means detects a collision and any of said acceleration comparing means referring to the corresponding acceleration sensor which is different from the acceleration sensor referred to by said collision detecting means detecting the collision has
25 detected an acceleration equal to or more than the set value during a predetermined past time period before the collision detection.

4. A collision determination system according to claim 3, wherein
said actuating signal outputting means outputs an actuating signal
under such conditions that any of said collision detecting means
detects a collision and the acceleration comparing means referring
5 to the acceleration sensor mounted adjacent to the acceleration
sensor referred to by said collision detecting means detecting
the collision has detected an acceleration equal to or more than
the set value during the predetermined past time period before
the collision detection.

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5. A collision determination system according to claim 3, wherein
a control unit including said collision detecting means,
acceleration comparing means and actuating signal outputting
means is mounted in a position different from that of said
15 acceleration sensors.